for angioplasty use with a burst pressure in excess of seven atmospheres.

167. The method of claim 166 wherein the first balloon layer has a burst strength greater than that of the second balloon layer.

168. The method of claim 167 wherein the second tube layer consists essentially of polyolefin.

169. The method of claim 168 wherein the second tube layer consists essentially of polyethylene.

170. The method of claim 167 wherein the second tube layer consists essentially of polyvinyl chloride.

171. The method of claim 167 wherein the second tube layer consists essentially of polyurethane.

172. The method of claim 166 wherein the first balloon layer is radially outside the second balloon layer.

173. The method of claim 167 wherein the second balloon layer is an innermost balloon layer.

174. The method of claim 166 wherein the tube is first longitudinally drawn and then radially expanded.

175. A method of making an angioplasty catheter balloon, the method comprising:

(a) forming a parison having an extruded first parison layer comprising a first polymeric material and an extruded second parison layer comprising a second polymeric material which is different than the first polymeric material, wherein the first polymeric material is selected from the group consisting of polyetheretherketone (PEEK) and polyetherketone (PEK);

(b) disposing the parison in a mold; and

(c) heating, longitudinally drawing, and radially expanding the parison to make a resulting balloon which is sized and configured for angioplasty use with a burst pressure in excess of seven atmospheres.

176. The method of claim 175 wherein the first balloon layer has a burst strength greater than that of the second balloon layer.

177. The method of claim 176 wherein the second parison layer consists essentially of polyolefin.

178. The method of claim 177 wherein the second parison layer consists essentially of polyethylene.

179. The method of claim 176 wherein the second parison layer consists essentially of polyvinyl chloride.

180. The method of claim 176 wherein the second parison layer consists essentially of polyurethane.

181. The method of claim 175 wherein the first balloon layer is radially outside the second balloon layer.

182. The method of claim 176 wherein the second balloon layer is an innermost balloon layer.

183. The method of claim 175 wherein the parison is first longitudinally drawn and then radially expanded.

184. The method of claim 166, wherein the first polymeric material is polyetheretherketone (PEEK).

185. The method of claim 184, wherein the first balloon layer consists essentially of polyetheretherketone (PEEK).

186. The method of claim 166, wherein the first polymeric material is polyetherketone (PEK).

187. The method of claim 186, wherein the first balloon layer consists essentially of polyetherketone (PEK).

188. The method of claim 166, wherein the forming step comprises coextruding the first tube layer with the second tube layer.

189. The method of claim 166, wherein the resulting balloon has a radial expansion not exceeding 3-10 percent when inflated to seven atmospheres.

190. The method of claim 166, wherein the first balloon layer is biaxially oriented.

191. The method of claim 166, wherein the second balloon layer is a bonding layer.

192. The method of claim 191, wherein the bonding layer is disposed towards the interior of the balloon relative to the first balloon layer, which is disposed toward the exterior.

193. The method of claim 166 further comprising forming a third layer on the balloon.

194. The method of claim 193, wherein the third layer enhances balloon lubricity and is disposed toward the exterior of the balloon relative to the first and second balloon layers.

195. The method of claim 175, wherein the first polymeric material is polyetheretherketone (PEEK).

196. The method of claim 195, wherein the first balloon layer consists essentially of polyetheretherketone (PEEK).

197. The method of claim 175, wherein the first polymeric material is polyetherketone (PEK).

198. The method of claim 197, wherein the first balloon layer consists essentially of polyetherketone (PEK).

199. The method of claim 175, wherein the forming step comprises coextruding the first parison layer with the second parison layer.

200. The method of claim 175, wherein the resulting balloon has a radial expansion not exceeding 3-10 percent when inflated to seven atmospheres.

201. The method of claim 175, wherein the first balloon layer is biaxially oriented.

202. The method of claim 175, wherein the second balloon layer is a bonding layer.

203. The method of claim 202, wherein the bonding layer is disposed towards the interior of the balloon relative to the first balloon layer, which is disposed toward the exterior.

204. The method of claim 175 further comprising forming a third layer on the balloon.

205. The method of claim 204, wherein the third layer enhances balloon lubricity and is disposed toward the exterior of the balloon relative to the first and second balloon layers.

~~206~~. A medical balloon catheter comprising a multilayer balloon having a first extruded layer and a second extruded layer, wherein the first layer comprises a first polymeric material selected from the group consisting of polyetheretherketone (PEEK) and polyetherketone (PEK), and the second layer comprises a second polymeric material different from ~~the first polymeric material.~~

~~207~~. The medical balloon catheter of claim ~~206~~ wherein the first polymeric material is polyetheretherketone (PEEK).

~~208. The medical balloon catheter of claim 207 wherein the first layer consists essentially of polyetheretherketone (PEEK).~~

~~209~~. The medical balloon catheter at claim ~~206~~ wherein the first polymeric material is polyetherketone (PEK).

~~210. The medical balloon catheter of claim 209 wherein the first layer consists essentially of polyetherketone (PEK).~~

~~211~~. The medical balloon catheter of claim 206 wherein the balloon is the product of coextruding the first and second layers.

~~212~~. The medical balloon catheter of claim 206 wherein the balloon has a radial expansion not exceeding 3 - 10 percent when inflated to seven atmospheres.

~~213~~. The medical balloon catheter of claim 206 wherein the first layer is biaxially oriented.

~~214~~. The medical balloon of claim 206 wherein the second layer is an adhesion layer.

215. The medical balloon of claim 214 wherein the adhesion layer is disposed toward the interior of the balloon relative to the second layer, which is disposed toward the exterior.

~~216~~. The medical balloon of claim ~~206~~ comprising a third layer.

~~217~~. The medical balloon of claim ~~216~~ wherein the third layer enhances lubricity and is disposed toward the exterior of the balloon relative to the first and second layer.--